1. Listing of the claims:

1. (Currently Amended) A motion-compensated image signal interpolation unit for generating an interpolated image intermediate a first image and a second image, the interpolated image being located at a first predetermined temporal distance (α) from the first image and being located at a second predetermined temporal distance (1- α) from the second image, the interpolation unit comprising:

a motion estimation unit for furnishing a first motion vector and a second motion vector relating to the first image and the second image, respectively;

a first sample generation unit generating a first group of samples based on the values of the pixels in the first image, the first motion vector and a first quotient wherein the first quotient is equal to a first spatial distance between a first one of the samples of the first group of samples and a second one of the samples of the first group of samples and the first predetermined temporal distance (α);

a second sample generation unit generating a second group of samples based on the values of the pixels in the second image, the second motion vector and a second quotient wherein the second quotient is equal to a second spatial distance ~~(x2)~~ between a first one of the samples of the second group of samples and a second one of the samples of the second group of samples and the second predetermined temporal distance (1- α); and

a filter that ordered statistical filters the samples of the first and the second group to produce a first value of a first pixel of the interpolated image ~~(102)~~, whereby the ~~a~~ first quotient is substantially equal to the second quotient.

2. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 1, whereby the filter includes a median filter.

3. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 2, whereby the filter includes a weighted median filter.

4. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 3, whereby a particular weighting coefficient of the weighted median filter for weighting a particular sample of the first group of samples is higher than each of the further

weighting coefficients for weighting further respective samples of the first group of samples, the particular sample being located in the center of the first group of samples.

5. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 4, whereby the particular weighting coefficient is higher than a sum of the further weighting coefficients.

6. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 1, whereby a second value corresponding to the first one of the samples of the first group equals a third value of a third one of the pixels of the first image.

7. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 1, whereby a second value corresponding to the first one of the samples of the first group is computed by means of interpolation of a third value of a third one of the pixels of the first image and a fourth value of a fourth one of the pixels of the first image in a spatial environment of the third one of the pixels.

8. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 1, whereby a direction of a line segment, connecting the first one of the samples of the first group and the second one of the samples of the first group, corresponds with the first motion vector.

9. (Previously Presented) The motion-compensated image signal interpolation unit as claimed in claim 1, whereby a direction of a line segment, connecting the first one of the samples of the first group and the second one of the samples of the first group, corresponds with a difference vector, the difference vector corresponding to a difference between the first motion vector and a third motion vector in a spatial environment of the first motion vector.

10. (Currently Amended) The motion-compensated image signal interpolation unit as claimed in claim 1, further comprising an edge-detection unit that detects an orientation of an edge in the first image and whereby a direction of a line segment, connecting the first one of the samples of the first group and the second one of the samples of the first group, is orthogonal to the orientation of the ~~an~~ edge.

11. (Previously Presented) A image processing apparatus comprising:

an input connector that receives an image signal representing a first and a second image; and

a motion-compensated image signal interpolation unit coupled to the input connector, that generates an interpolated image intermediate the first and the second image, the interpolated image being located at a first predetermined temporal distance from the first image and being located at a second predetermined temporal distance from the second image, the interpolation unit as claimed in claim 1.

12. (Previously Presented) The image processing apparatus as claimed in claim 11, further comprising a display device for displaying the interpolated image.

13. (Currently Amended) A method of generating an interpolated image intermediate a first image and a second image, the interpolated image being located at a first predetermined temporal distance from the first image and being located at a second predetermined temporal distance from the second image, the method comprising:

furnishing a first motion vector and a second motion vector relating to the first image and the second image, respectively;

generating a first group of samples based on the values of the pixels in the first image, the first motion vector and a first quotient wherein the first quotient is equal to a first spatial distance between a first one of the samples of the first group of samples and a second one of the samples of the first group of samples and the first predetermined temporal distance (α);

generating a second group of samples based on the values of the pixels in the second image, the second motion vector and a second quotient wherein the second quotient is equal to a second spatial distance (x2) between a first one of the samples of the second group of samples and a second one of the samples of the second group of samples and the second predetermined temporal distance (1- α); and

ordered statistical filtering of the samples of the first and the second group to produce a first value of a first pixel of the interpolated image whereby the first quotient is substantially equal to the second quotient.

14. (Currently Amended) A computer program product to be loaded by a computer arrangement, comprising instructions to generate an interpolated image intermediate a first image and a second image, the interpolated image being located at a first predetermined temporal distance from the first image and being located at a second predetermined temporal distance from the second image, the computer arrangement comprising processing means and a memory, the computer program product, after being loaded, providing said processing means with the capability to carry out:

furnishing a first motion vector and a second motion vector relating to the first image and the second image, respectively;

generating a first group of samples based on the values of the pixels in the first image, the first motion vector and a first quotient wherein the first quotient is equal to a first spatial distance between a first one of the samples of the first group of samples and a second one of the samples of the first group of samples and the first predetermined temporal distance (α);

generating a second group of samples based on the values of the pixels in the second image, the second motion vector and a second quotient wherein the second quotient is equal to a second spatial distance ~~(x2)~~ between a first one of the samples of the second group of samples and a second one of the samples of the second group of samples and the second predetermined temporal distance (1- α); and

ordered statistical filtering of the samples of the first and the second group to produce a first value of a first pixel of the interpolated image, whereby the first quotient is substantially equal to the second quotient.

15. (Currently Amended) A motion-compensated image signal interpolation unit for generating an interpolated image intermediate a first image and a second image, the interpolated image being located at a first predetermined temporal distance (α) from the first image and being located at a second predetermined temporal distance (1- α) from the second image, the interpolation unit comprising:

motion estimation means for furnishing a first motion vector and a second motion vector relating to the first image and the second image, respectively;

first sample generation means for generating a first group of samples based on the values of the pixels in the first image, the first motion vector and a first quotient wherein the first quotient is equal to a first spatial distance between a first one of the samples of the first group of samples and a second one of the samples of the first group of samples and the first predetermined temporal distance (α);

second sample generation means for generating a second group of samples based on the values of the pixels in the second image, the second motion vector and a second quotient wherein the second quotient is equal to a second spatial distance (x2) between a first one of the samples of the second group of samples and a second one of the samples of the second group of samples and the second predetermined temporal distance (1- α); and

filtering means for ordered statistical filtering of the samples of the first and the second group to produce a first value of a first pixel of the interpolated image, whereby the first quotient is substantially equal to the second quotient.

16. (Previously Presented) The motion-compensated image signal interpolation unit of claim 1, wherein the filtering means includes a median filter.

17. (Previously Presented) The motion-compensated image signal interpolation unit of claim 1, wherein the filtering means includes a weighted median filter.

18. (Previously Presented) The motion-compensated image signal interpolation unit of claim 17, whereby a particular weighting coefficient of the weighted median filter for weighting a particular sample of the first group of samples is higher than each of the further weighting coefficients for weighting further respective samples of the first group of samples, the particular sample being located in the center of the first group of samples.

19. (Previously Presented) The motion-compensated image signal interpolation unit of claim 18, whereby the particular weighting coefficient is higher than a sum of the further weighting coefficients.